

What is claimed is:

1. High pressure discharge lamp device comprising:

- a high pressure discharge lamp having a pair of opposed electrodes in a silica glass discharge vessel,
- a DC power source,
- an inverter circuit having a front stage and a rear stage and which is comprised of four switching devices connected in a bridge circuit manner, by which a dead time is produced when all switching devices are turned off, and which converts a DC current from said power source into an AC current supplied to the high pressure discharge lamp,
- a capacitor which is connected in the front stage of the inverter circuit, and
- an inductance element which is series-connected in the rear stage of the inverter circuit and to the high pressure discharge lamp, and said inductance element, together with the capacitor, forming a loop which, during said dead time, supplies current to the high pressure discharge lamp, and

wherein a value LL (H) of the inductance L of the above described inductance element is fixed in accordance with the relationship $LL \geq VL/IL \cdot Td$, where VL is the luminous voltage of the discharge lamp, IL (A) is the current flowing in the discharge lamp and Td (seconds) is the dead time.

2. Device for operating a high pressure discharge lamp in accordance with claim 1,

wherein at least part of the above described inductance element is formed from an ignition coil transformer.